

TECHNICAL SPECIFICATIONS

LIBERO GL

Multi Use Real-Time Temperature Data Logger

With its unbeatable runtime of more than one year, LIBERO GL is the flexible and compliant real-time temperature data logger for various applications. The internal temperature sensor is highly accurate and comes with a 100% sensor calibration. In addition to temperature, LIBERO GL monitors the location of the shipment. LIBERO GL features a powerful, interactive display to facilitate your shipment process. LIBERO GL uploads all measured data automatically to a safe cloud environment where all shipments are monitored. The automatic flight detection and the abandonment of lithium batteries allows the usage for airfreight without cumbersome dangerous goods declaration. Up to 31.000 temperature values can be stored on the data logger to temporarily buffer measurement data. At the end of the shipment, release products directly based on the OK or ALARM status on the display and download the PDF report from the monitoring software (elproCLOUD / liberoMANAGER). Optionally, a robust, lockable bracket is available to hold LIBERO Gx in a defined position. The multi use capability of the LIBERO GL significantly lowers cost per use, making the LIBERO GL a versatile, cost effective choice.



we prove it.



- > Real-time insights into your valuable shipments on road, air and sea
- > Highly accurate and 100% calibrated temperature sensor
- > Simple and safe in use and application
- > Fully compliant with industry guidelines

Technical Specifications LIBERO GL

Application area Transport Monitoring: global distribution of temperature sensitive products Recording options and mode Multiple use: start/stop, Loop mode Sensors High accuracy digital temperature sensor Geographical location Light Tilt Measurement range Measurement ange of internal sensor - 30 °C. +70 °C Application range O °C. +55 °C (only short term use above and below application range allowed) ¹ Internal Sensor ±1.0 °C for -30.0 °C20.1 °C ±0.5 °C for -20.0 °C0.1 °C ±0.5 °C for +55.1 °C. +70 °C Resolution Measurement interval Cellular network ITE-M and NB-IoT Communication interval 30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD/liberoMANAGER Communication interval via elproCLOUD/liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication). Measurement capacity Expiry date and battery life Expiry date and battery life Started data logger runs up to 14 months. Genoths continuous operation with 15 min measurement interval and 120 min communication interval below 0° C and above +55 °C will shorten battery life. Ad-Alkaline batteries (non-replaceable), exempt from DGR declaration Configurable alarms Temperature thresholds with alarm delay (4 upper limits, 3 lower limits) Multifunction LCD, size: 42 × 20 mm Multifunction LCD, size: 42 × 20 mm Manufacturer validation certificate per delivery, production validation and 3-point calibration certificate (LAC/NIST/ISO 17025 traceable) pre ID number via compliance elpro.com, additional customer-specific calibration points optionally available. Traceability Unique ID number (traceable to component level) Standards EN 12830 RTCA DO-160 (EMC) GAMP5 Let Good Camperature excursion or occurrences via elproCLOUD / liberoMANAGE Conformity CE	•	
Recording options and mode Sensors High accuracy digital temperature sensor Geographical location Light Tilt Measurement range Measurement range of internal sensor: -30 °C. +70 °C Application range Measurement accuracy Internal Sensor	Туре	Wireless Data logger with internal temperature sensor
Measurement range Measurement range of internal sensor: -30 °C+70 °C	Application area	Transport Monitoring: global distribution of temperature sensitive products
Measurement range Application range O *C.+55 *C (only short term use above and below application range allowed) ¹ Internal Sensor ±1.0 *C for -3.0.0 *C20.1 *C ±0.5 *C for -2.0.0 *C0.1 *C ±0.5 *C for -2.0.0 *C0.1 *C ±0.5 *C for -3.0.0 *C20.1 *C ±0.5 *C for -3.0 *C0.1 *C ±0.5 *C for -3.0 *C0.1 *C ±0.5 *C for -3.0 *C0.1 *C ±0.5 *C for +65.1 *C.+70 *C Resolution Measurement interval 5 to 60 minutes, configurable via elproCLOUD/liberoMANAGER Cellular network LTE-M and NB-IoT 30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD/liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication). Measurement capacity 31.000 measurement values (equals 322 days with 15 min measurement interval) Expiry date and battery life Expiry date and battery life Ala logger can be started any time during shelf life (auto expiry data management). Started data logger uns up to 14 months. 6 months continuous operation with 15 min measurement interval and 120 min communication interval. Intensified communication behavior (e.g. bad connection or local provider settings) and application below of C and above +55 *C will shorten battery life. Battery type A-Alkialine batteries (non-replaceable), exempt from DGR declaration Configurable alarms 7 temperature thresholds with alarm delay (4 upper limits, 3 lower limits) Start-up delay Certificate (ILAC/NIST/ISO 17025 traceable) pre ID number via compliance.elpro.com, additional customer-specific calibration points optionally available. Traceability Unique ID number (traceable to component level) Reporting Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGE	Recording options and mode	Multiple use: start/stop, Loop mode
Application range Measurement accuracy Internal Sensor ±1.0 "C for -3.0.0 "C2.0.1 "C ±0.5 " C for -3.0.0 "C2.0.1 "C ±0.5 " C for -3.0.0 "C0.1 "C ±0.5 " C for -3.0.0 " C0.1 "C ±0.5 " C for -3.0.0 " C0.1 "C ±0.5 " C for -3.0 " C0.1 " C ±0.5 " C for -3.0 " C0.1 " C ±0.5 " C for -3.0 " C ±0.5 " C for -3.	Sensors	High accuracy digital temperature sensor Geographical location Light Tilt
Measurement accuracy Internal Sensor 1.0 °C for -3.00 °C0.1 °C 40.5 °C for -2.00 °C0.1 °C 40.5 °C for +05.1 °C70 °C Resolution Measurement interval S to 60 minutes, configurable via elproCLOUD/liberoMANAGER Cellular network Communication interval 30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD/liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication in fozen application (measurement data is buffered and is transmitted with next ordinary communication.) Expiry date and battery life Expiry date and battery life Started data logger runs up to 14 months. 6 months continuous operation with 15 min measurement interval and 120 min communication interval. Intensified communication behavior (e.g. bad connection or local provider settings) and application below 0° C and above +55 °C will shorten battery life. Battery type Configurable alarms Configurable alarms T temperature thresholds with alarm delay (4 upper limits, 3 lower limits) Start-up delay Display Multifunction LCD, size: 42 × 20 mm Manufacture validation certificate per delivery, production validation and 3-point calibration certificate (ILAC/NIST/ISO 17025 traceable) pre 10 number via compliance.elpro.com, additional customer-specific calibration points optionally available. Traceability Unique ID number (traceable to component level) Reporting Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGE Conformity CE FCC UKCA ICES ROHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM	Measurement range	Measurement range of internal sensor: -30 °C+70 °C
#1.0 °C for -30.0 °C20.1 °C #10.5 °C for -20.0 °C0.1 °C #10.5 °C for -20.0 °C0.1 °C #10.5 °C for +65.1 °C.+05.0 °C #10.5 °C for +65.1 °C.+70 °C #10.5 °C for +65.1 °C.+70 °C Resolution Measurement interval ITE-M and NB-IoT Communication interval all opinication interval all opinication interval Weasurement capacity Battery life Expiry date and battery life Expiry date and battery life Battery type A-Alkaline batteries (non-replaceable), exempt from DGR declaration Configurable alarms Tominication interval Configurable based on time, temperature or button Multifunction LCD, size: 42 × 20 mm Manufacturer validation certificate per delivery, production validation and 3-point calibration certificate (LIAC/NIST/ISO 17025 traceable) pre ID number via compolance.elpro.com, additional customer-specific calibration weight IP code Conformity Reporting Reporting Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGER Cel ECC UKCA ICES ROHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM	Application range	0 °C+55 °C (only short term use above and below application range allowed) ¹
Cellular network LTE-M and NB-IoT	Measurement accuracy	±1.0 °C for -30.0 °C20.1 °C ±0.5 °C for -20.0 °C0.1 °C ±0.4 °C for 0.0 °C+65.0 °C
Cellular network Communication interval 30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD / liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication). Measurement capacity Expiry date and battery life Expiry date and battery life Data logger can be started any time during shelf life (auto expiry data management). Started data logger runs up to 14 months. 6 months continuous operation with 15 min measurement interval and 120 min communication interval. Intensified communication behavior (e.g. bad connection or local provider settings) and application below 0° C and above +55° C will shorten battery life. Battery type AA-Alkaline batteries (non-replaceable), exempt from DGR declaration Configurable alarms 7 temperature thresholds with alarm delay (4 upper limits, 3 lower limits) Start-up delay Configurable based on time, temperature or button Display Multifunction LCD, size: 42 × 20 mm Certificate (ILAC/NIST/ISO 17025 traceable) pre ID number via compliance.elpro.com, additional customer-specific calibration points optionally available. Traceability Unique ID number (traceable to component level) Reporting Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGE Case dimension weight IP code ABS plastic material 100 × 65 × 19 mm (3.9 × 2.5 × 0.7 in) 125 g (4.4 oz) IP54 Conformity CE FCC UKCA ICES ROHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM	Resolution	0.1°
Communication interval 30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD/liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication). Measurement capacity 31.000 measurement values (equals 322 days with 15 min measurement interval) Expiry date and battery life Data logger can be started any time during shelf life (auto expiry data management). Started data logger runs up to 14 months. 6 months continuous operation with 15 min measurement interval and 120 min communication interval. Intensified communication behavior (e.g. bad connection or local provider settings) and application below 0° C and above +55° C will shorten battery life. Battery type AA-Alkaline batteries (non-replaceable), exempt from DGR declaration Configurable alarms 7 temperature thresholds with alarm delay (4 upper limits, 3 lower limits) Start-up delay Configurable based on time, temperature or button Display Multifunction LCD, size: 42 × 20 mm Certificate Manufacturer validation certificate per delivery, production validation and 3-point calibration certificate (ILAC/NIST/ISO 17025 traceable) pre ID number via compliance elpro.com, additional customer-specific calibration points optionally available. Traceability Unique ID number (traceable to component level) Reporting Real-rtime visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGE Case dimension weight IP code Conformity CE FCC UKCA ICES ROHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM	Measurement interval	5 to 60 minutes, configurable via elproCLOUD/liberoMANAGER
via elproCLOUD / liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication). Measurement capacity 31.000 measurement values (equals 322 days with 15 min measurement interval) Expiry date and battery life Expiry date and battery life Data logger can be started any time during shelf life (auto expiry data management). Started data logger runs up to 14 months. 6 months continuous operation with 15 min measurement interval and 120 min communication interval. Intensified communication behavior (e.g. bad connection or local provider settings) and application below 0° C and above +55 °C will shorten battery life. Pathery type AA-Alkaline batteries (non-replaceable), exempt from DGR declaration Configurable alarms 7 temperature thresholds with alarm delay (4 upper limits, 3 lower limits) Start-up delay Configurable based on time, temperature or button Display Multifunction LCD, size: 42 × 20 mm Certificate Manufacturer validation certificate per delivery, production validation and 3-point calibration certificate (ILAC/NIST/ISO 17025 traceable) pre ID number via compliance.elpro.com, additional customer-specific calibration points optionally available. Traceability Unique ID number (traceable to component level) Reporting Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGE Case dimension weight IP code ABS plastic material 100 × 65 × 19 mm (3.9 × 2.5 × 0.7 in) 125 g (4.4 oz) IP54 Conformity CE FCC UKCA ICES RoHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM	Cellular network	LTE-M and NB-IoT
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Conformity CE FCC UKCA ICES RoHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM	Reporting	Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD/liberoMANAGE
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Standards EN 12830 RTCA DO-160 (EMC) GAMP5	Conformity	CE FCC UKCA ICES ROHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM
	Standards	EN 12830 RTCA DO-160 (EMC) GAMP5

¹ No communication if the device is used in a direct environment below 0°C. For a secure communication below 0°C, use LIBERO GF.